Section V
Actual-to-Expected Analysis

The actual-to-expected analysis was developed to assess how well the model predicts actual VA utilization experience, to adjust the model to reflect unexplained differences between the predictions and actual utilization experience, and to identify potential enhancements to the model. One such enhancement this year was to develop separate DoCM adjustments for Medical, Surgical, Psychiatric and Substance Abuse inpatient stays (described in Section II). The actual-to-expected adjustment factors that are developed in this analysis fine-tune the model's predictive capabilities. In the private sector, this type of adjustment factor is referred to as an experience adjustment factor and is widely used to improve estimates of future health care utilization. It should be noted that this adjustment is not intended to adjust the model to local VA supply constraints. The adjustment factors are developed at the national level and so they do not reflect variations in supply by VISN (or facility or county of residence). They only reflect, to the extent that it exists, VA supply limitations at the national level.

The step-by-step process that is used to develop the actual-to-expected adjustment factors includes six steps:

1. Develop detailed FY 2001 utilization estimates using the model at the Facility (or county), Age Group, Enrollee Type, Priority Level and Health Care Service category (HSC) level.
2. Composite the resulting FY 2001 utilization rates to develop composite utilization rates for each Age Group, Enrollee Type, Priority Level combination at the national level for each HSC.
3. Calculate the actual utilization rates for FY 2001 from VA workload for each HSC at the national level for each Age Group, Enrollee Type and Priority Level combination.
4. Compare the FY 2001 actual utilization rates with the modeled utilization rates to develop actual-to-expected adjustment factors that vary by Age Group, Enrollee Type, Priority Level and HSC grouping (some HSCs are combined due to credibility issues).
5. Develop detailed utilization projections at the Facility (or county), Age Group, Enrollee Type, Priority Level and HSC level for fiscal years 2002 through 2022.
6. Apply the appropriate actual-to-expected adjustment factor to each detailed modeled. (For example, for the Togus facility Enrollee Pre, Ages 65 & Over, Priority Level 5 projections, the National, Enrollee Pre, Ages 65 & Over, Priority Level 5 actual-to-expected adjustment factors for each HCS category would be applied.)

Development of Actual-to-Expected Adjustment Factors

FY 2001 VHA utilization experience for prescription drugs, inpatient stays and ambulatory (outpatient physician) services was obtained from VA. FY 2001 projections were developed using actual FY 2001 enrollment and the model with all FY 2003 ELDA enhancements and factor updates. These results were compared to actual FY 2001 VA utilization. The results of this analysis are presented in Exhibit V-1.

Exhibit V-1 details the actual-to-expected ratios by HSC. The actual utilization was developed from the FY 2001 workload and the FY 2001 Fee-Based-Care data sets. The expected utilization was developed using the model with assumptions that are appropriate to FY 2001. The actual-to-expected utilization ratios show how well the model would have predicted FY 2001 experience. From this analysis the residual adjustments to the private sector benchmarks that were not fully captured by all of the adjustments described in this document were determined. Since the reliance and morbidity adjustments rely on survey data, they may not fully reflect the true differences in utilization for Enrollees. Also, inpatient length-of-stay analyses were used to establish the DoCM for both admissions and length of stay. The assumption was made, due to lack of data, that outpatient services were delivered at the community loosely managed level during FY 1999 and at 5% DoCM during FY 2001. To the extent that any of these estimated adjustments are not accurate, an experience adjustment can enhance the model. The actual-to-expected adjustments vary by Enrollee Type, Age Group, Priority Level, and HSC groupings. The HSC groupings for inpatient care are Medical, Surgical, Mental Health and Substance Abuse. The groupings for outpatient care are Cardiovascular, Emergency Room Visits, Immunizations, Mental Health, Office Visits, Radiology, Pathology, Surgery, Physical Exams, Physical Medicine, Other Visits and Other Procedures. Factors were also developed for Glasses/Hearing Aids and for Prescription Drugs.

Complete enrollment for FY 2001 was used in this analysis. The "Cost-Only" enrollees, with demographic information attributed when not available, were included in the enrollment. Enrollee age was calculated as of April 1, 2001, the midpoint of FY 2001.

The VA workload data used for this analysis was analyzed and measured as described in Section IV. This ensured that both components of the actual-to-expected analysis were categorized and counted using the same set of rules.

Exhibit V-1
Department of Veterans Affairs
Actual to Expected Utilization Analysis for ELDA 2003
Fiscal Year 2001 National Model, All Enrollees, All Priority Levels, All Ages

	Admits Per 1,000		
INPATIENT ACUTE HOSPITAL	Actual	Expected	A/E
Medical	66.9	68.0	0.98
Surgical	17.4	17.3	1.00
Psychiatric	12.9	14.5	0.89
Substance Abuse	8.3	8.3	1.01
Subtotal	105.5	108.1	0.98

	Average Length of Stay		
INPATIENT ACUTE HOSPITAL	Actual	Expected	A/E
Medical	5.5	6.6	0.83
Surgical	9.9	8.8	1.12
Psychiatric	11.0	12.9	0.86
Substance Abuse	6.4	10.7	0.60
Subtotal	7.0	8.1	0.86

	Days Per 1,000		
INPATIENT ACUTE HOSPITAL	Actual	Expected	A/E
Medical	368.1	450.9	0.82
Surgical	171.4	153.0	1.12
Psychiatric	142.4	186.9	0.76
Substance Abuse	53.5	88.1	0.61
Subtotal	735.3	878.9	0.84

	Units Per 1,000		
AMBULATORY	Actual	Expected	A/E
Allergy Immunotherapy	11.1	227.3	0.05
Allergy Testing	1.4	217.1	0.01
Anesthesia	22.0	68.2	0.32
Cardiovascular	424.6	712.3	0.60
Consults	192.9	313.6	0.62
Emergency Room Visits	221.9	147.3	1.51
Glasses/Hearing Aids	66.2	143.7	0.46
Hearing/Speech Exams	264.2	96.4	2.74
Immunizations	361.0	208.3	1.73
Inpatient Visits	23.7	-	-
Maternity Deliveries	0.0	0.5	0.09
Maternity Non-Deliveries	0.2	0.3	0.55
Misc. Medical	954.2	1,705.0	0.56
Office/Home/Urgent Care Visits	4,636.1	4,548.0	1.02
Outpatient Psychiatric	1,259.9	1,332.2	0.95
Pathology	6,638.7	4,839.6	1.37
Physical Exams	383.0	131.5	2.91
Physical Medicine	1,072.6	1,514.5	0.71
Radiology	889.0	1,130.4	0.79
Surgery	467.8	625.5	0.75
Sterilizations	0.2	0.7	0.28
Therapeutic Injections	326.8	556.6	0.59
Vision Exams	175.0	442.8	0.40
Subtotal	18,392.5	18,962.0	0.97
GROUPED AMBULATORY CATEGORIES			
OP-ER Visits	221.9	147.3	1.51
OP-Immunizations	361.0	208.3	1.73
OP-OP Psych	1,259.9	1,332.2	0.95
OP-Other Proc & Cardiovascular	1,718.1	3,418.3	0.50
OP-Other Visits	632.1	852.9	0.74
OP-Office Visits	4,636.1	4,458.0	1.02
OP-Pathology	6,638.7	4,839.6	1.37
OP-Physical Exams	383.0	131.5	2.91
OP-Physical Medicine	1,072.6	1,514.5	0.71
OP-Radiology	889.0	1,130.4	0.79
OP-Surgery (use for Anesthesia)	468.0	626.2	0.75

	Scripts Per 1,000		
OTHER	Actual	Expected	A/E
Prescription Drugs	30,193.6	33,404.0	0.90